

**Notice of Allowability**

Application No.

10/760,023

Examiner

Shih-Chao Chen

Applicant(s)

HONDA, ROYDEN M.

Art Unit

2821

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to the application filed on Jan. 16, 2004.
2. ☒ The allowed claim(s) is/are 1-85.
3. ☒ The drawings filed on 16 January 2004 are accepted by the Examiner.
4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) ☐ All b) ☐ Some\* c) ☐ None of the:
    1. ☐ Certified copies of the priority documents have been received.
    2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
    3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
  6. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
    - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
      - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
    - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☒ Information Disclosure Statements (PTO-1449 or PTO/SB/08),  
Paper No./Mail Date 1/16/04
4. ☐ Examiner's Comment Regarding Requirement for Deposit  
of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☐ Interview Summary (PTO-413),  
Paper No./Mail Date \_\_\_\_\_
7. ☐ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other \_\_\_\_\_

*Shih-Chao Chen*  
**SHIH-CHAO CHEN**  
**PRIMARY EXAMINER**

**DETAILED ACTION**

***Allowable Subject Matter***

1. Claims 1-85 are allowed.
2. The following is an examiner's statement of reasons for allowance:

The primary reason for the allowance of claims 1-25 and 39-44 is the inclusion of the limitations of an electromagnetic lens comprising: an input section including a plurality of input probes; an output section including a plurality of output probes; and a coupling section including a coupling slot and a curvilinear coupling wall. It is this limitation found in each of the claims, as it is claimed in the combination, that has not been found, taught or suggested by the prior art of record which makes these claims allowable over the prior art.

The primary reason for the allowance of claims 26-38 is the inclusion of the limitations of an access station comprising: a lens including: an input section including a plurality of input probes; an output section including a plurality of output probes; and a coupling section including a coupling slot and a curvilinear coupling wall. It is this limitation found in each of the claims, as it is claimed in the combination, that has not been found, taught or suggested by the prior art of record which makes these claims allowable over the prior art.

The primary reason for the allowance of claims 45-52 is the inclusion of the limitations of an electromagnetic lens comprising: an input spacer having a hyperbolic input reflector and a parabolic input coupling wall, the input spacer located between the input plate and the common plate; and an output spacer having a linear output reflector

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and a parabolic output coupling wall, the output spacer located between the output plate and the common plate. It is this limitation found in each of the claims, as it is claimed in the combination, that has not been found, taught or suggested by the prior art of record which makes these claims allowable over the prior art.

The primary reason for the allowance of claims 53-59 is the inclusion of the limitations of an electromagnetic lens comprising: a second layer adjacent to the first layer, the second layer including a plurality of input probes, a curvilinear input reflector, and a first curvilinear coupling wall; a third layer adjacent to the second layer, the third layer including a coupling slot; and a fourth layer adjacent to the third layer, the fourth layer including a plurality of output probes, a curvilinear output reflector, and a second curvilinear coupling wall. It is this limitation found in each of the claims, as it is claimed in the combination, that has not been found, taught or suggested by the prior art of record which makes these claims allowable over the prior art.

The primary reason for the allowance of claims 60-63 is the inclusion of the limitations of an access station comprising: a lens including: a second layer adjacent to the first layer, the second layer including a plurality of input probes, a curvilinear input reflector, and a first curvilinear coupling wall; a third layer adjacent to the second layer, the third layer including a coupling slot; and a fourth layer adjacent to the third layer, the fourth layer including a plurality of output probes, a curvilinear output reflector, and a second curvilinear coupling wall. It is this limitation found in each of the claims, as it is claimed in the combination, that has not been found, taught or suggested by the prior art of record which makes these claims allowable over the prior art.

The primary reason for the allowance of claims 64-66 is the inclusion of the limitations of an electromagnetic lens comprising: a second layer adjacent to the first layer, the second layer including a plurality of input probes, a hyperbolic input reflector, and a first curvilinear coupling wall; a third layer adjacent to the second layer, the third layer including a parabolic coupling slot; and a fourth layer adjacent to the third layer, the fourth layer including a plurality of output probes, a linear output reflector, and a second parabolic coupling wall. It is this limitation found in each of the claims, as it is claimed in the combination, that has not been found, taught or suggested by the prior art of record which makes these claims allowable over the prior art.

The primary reason for the allowance of claims 67-69 is the inclusion of the limitations of an electromagnetic lens comprising: a second layer adjacent to the first layer, the second layer including a plurality of input probes, a multi-foci extrapolated curved reflector, and a first linear coupling wall; a third layer adjacent to the second layer, the third layer including a linear coupling slot; and a fourth layer adjacent to the third layer, the fourth layer including a plurality of output probes, an extrapolated curved reflector that is related to the multi-foci extrapolated curved reflector, and a second linear coupling wall. It is this limitation found in each of the claims, as it is claimed in the combination, that has not been found, taught or suggested by the prior art of record which makes these claims allowable over the prior art.

The primary reason for the allowance of claim 71 is the inclusion of the limitation of step of collecting the electromagnetic wave at the plurality of output probes using a linear reflector. It is this limitation found in the claim, as it is claimed in the combination,

that has not been found, taught or suggested by the prior art of record which makes this claim allowable over the prior art.

The primary reason for the allowance of claims 72-80 is the inclusion of the limitation of step of collecting the electromagnetic wave at the plurality of output probes using a curvilinear reflector. It is this limitation found in each of the claims, as it is claimed in the combination, that has not been found, taught or suggested by the prior art of record which makes these claims allowable over the prior art.

The primary reason for the allowance of claims 81-82 is the inclusion of the limitation of step of collecting the electromagnetic wave at the plurality of output probes using an extrapolated curved reflector that is related to the multi-foci extrapolated curved reflector. It is this limitation found in each of the claims, as it is claimed in the combination, that has not been found, taught or suggested by the prior art of record which makes these claims allowable over the prior art.

The primary reason for the allowance of claims 83-85 is the inclusion of the limitation of step of coupling means for coupling the electromagnetic wave from the first guidance means to the second guidance means using the curvilinear coupling wall. It is this limitation found in each of the claims, as it is claimed in the combination, that has not been found, taught or suggested by the prior art of record which makes these claims allowable over the prior art.

Silva et al. (US 2004/0224637 A1) teaches an antenna array that is formed with an array of antenna elements. Each antenna element has multiple communication signal transfer slots that are formed into a front surface of an antenna element.

However, Silva et al. does not disclose or suggest an electromagnetic lens comprising: an input section including a plurality of input probes; an output section including a plurality of output probes; and a coupling section including a coupling slot and a curvilinear coupling wall.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

#### ***Correspondence***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Shih-Chao Chen whose telephone number is (571) 272-1819. The examiner can normally be reached on Monday-Friday from 7 AM to 4:30 PM, First Fri. off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Don Wong can be reached on (571) 272-1834. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Shih-Chao Chen  
Primary Examiner  
Art Unit 2821

*shih-chao chen*  
**SHIH-CHAO CHEN**  
**PRIMARY EXAMINER**

SXC  
July 19, 2005